

Hottop

By
Chang Yue Industrial Corp.

Hottop Coffee Roaster User Manual



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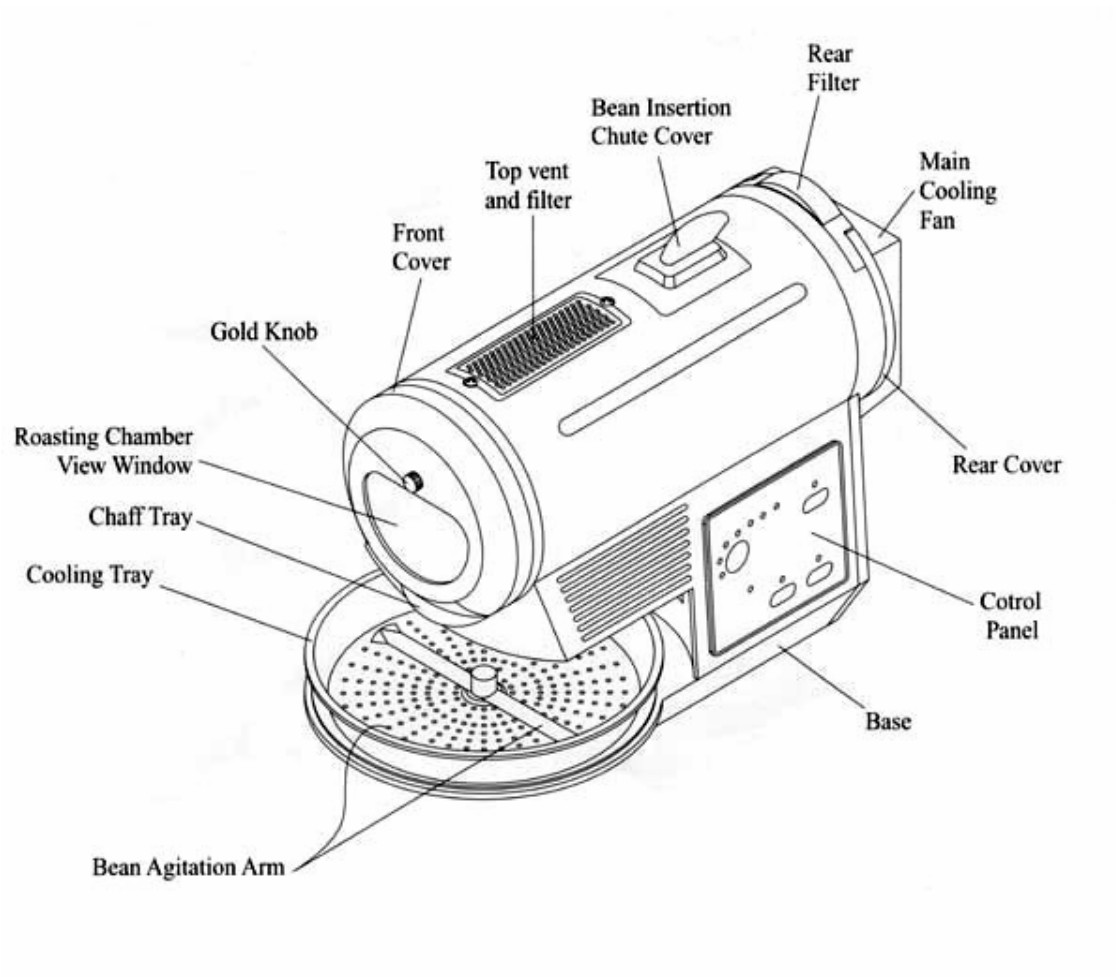
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Overview



How to set the guard

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I - Coffee roasting, history

Less than half a century ago, it was common for people to buy raw coffee beans from the stores, and roast these at home. At that time, roasting coffee was considered a normal part of everyday life. There were many types of small hand-cranked roasting devices available, usually heated with wood, coal, or gas. These were either used in the kitchen, the garden, or on the balcony. People took pride in their ability to produce the type of roast that they liked best, and considered it a sort of ceremony, or art. The sweet smell of fresh roasted coffee lingered in the streets.

By the 1950s, the convenience-food industry took over this culinary craft. The same brands that also produce instant soups, and washing detergents, erected large coffee roasting facilities to provide people with a ready made product. Today most consumers buy vacuum packed pre-ground coffee from these factories, unaware of the culinary tradition that once existed.

However, abandoning home coffee roasting has come at a price. While raw coffee will easily keep well for years, it is scientifically proven that roasted whole coffee beans lose their flavour within weeks after roasting. Ground coffee stales at an even faster rate, and loses all taste within a matter of hours. Consequently, most cans and vacuum bricks found on the supermarkets shelves contain no coffee, but a brown, powdery substance that has long lost its precious, volatile flavours. Even when one finds whole beans in a supermarket or specialty shop, one hardly ever knows whether these beans are fresh, or many months old.

Finally, like all convenience products, the coffee available in the stores today may be of uniform quality and style, but it may be very different from what you like best.

For these reasons, the best way to ensure yourself of true fresh coffee, roasted to match your personal preferences, is to return to the great tradition of home coffee roasting. More and more people like you are discovering this, and home coffee roasting is quickly becoming the latest culinary trend.

We want to and thank you for your decision to purchase our Hottop Coffee Roaster. We feel that this is the most advanced coffee roaster available for home use, and when used with care will provide you with excellent coffee. You are about to find out how good freshly roasted coffee can really taste.

Please take the time to read the instructions in this manual carefully. By doing so, you and your guests will be able to truly enjoy the excellent flavours of specialty coffee, roasted precisely as you will like it best. The Hottop Coffee Roaster makes that easier than ever before.

Please keep this manual in a convenient place, so you can reread it when necessary. If you are uncertain about anything, or if you have any questions, please ask your local dealer or us. We are always ready to help.

II – Introduction to roasting

Coffee roasting is a complex process. As explained above, getting the best flavour from the coffee is a true culinary art. Like other cooking skills, you have to learn a little to get the best results. We have made the Hottop Coffee Roaster so that it takes much of the difficult work out of your hand, but it is important to know that you know what to expect when using the Hottop Coffee Roaster, and when to expect it.

If you have no prior experience with roasting coffee, we highly recommend that you read this chapter carefully, so you will understand what happens during roasting. Please read the descriptions below, and watch the beans carefully during your first roast. In particular, pay attention to the sounds, the appearance of the beans, and smells.

Recognizing Roast Level

There are three indicators of roast level, which help professional roasters recognize the level of roast during this process. The first, and most obvious, is sound. This is the easiest for a beginning roaster to learn, and will give you a good gauge of the roast level. Another indicator is the colour of the beans. It is easy to see how the beans change colour as the roast progresses, but it can be difficult to accurately discern the true roast colour of the beans, since the changes are continuous and subtle. Lastly, there is a noticeable difference in smell as the roast progresses. This is the most difficult to learn as the sense of smell is difficult to describe and hard to remember specifically.

Sound

While the beans are being roasted they will actually make sounds, called "cracks". The first sounds will start after about first fifteen minutes of roasting.

This crackling starts slowly at first. Initially, you will notice just an occasional crack, followed by another a few seconds later. Then more snaps sound shorter after another, and the sound becomes gradually more rapid. After a while, the progression of sounds slows down again, and eventually subsides altogether.

There are two different periods during roasting, when you will notice crackling sounds. For obvious reasons, these are called *first crack*, and *second crack*. When the first period ends, there is often a short pause before the period of *second crack* starts. The actual times, at which these periods start and stop again, depend a lot on the variety of coffee you are roasting. Also, there are differences in sound, volume, and speed. Lastly, depending on the variety of coffee you are roasting, the two periods can partly overlap, making it difficult to tell when *first crack* ends, and *second crack* begins. This is particularly the case when roasting e.g. Indonesian coffees.

For your first roast, it may be best to seek out a variety that has very distinct periods of crackling; Central American or South American varieties, such as Guatemalan or Colombian coffees, are a good choice for your first roasts.

First Crack

As explained above, "first crack" refers not to the very first sound, but to a specific period of similar sounds. First crack sounds somewhat like breaking pencils: distinct, fairly loud, and sharp snaps. Because the Hottop Coffee Roaster operates very quietly, it is easy to hear this, even from some distance. In the Hottop Coffee Roaster first crack usually starts after about 15 minutes of roasting time. By this time, the beans in the roaster are already light brown, and the grassy smelling steam has changed to a mellow smoke. You will first hear an occasional snap, then another, then the crackling gradually speeds up, and, after a while, slows down again.

Second Crack

After first crack ends there is usually a period of about one minute before second crack begins. By that time, the beans are a dark shade of brown. Second crack can be a little more difficult to hear as they are quieter, but once you learn to distinguish the sound it is unmistakable. It is a more muffled sound, a bit like like breaking toothpicks. Generally these snaps follow one another more rapidly than during first crack.

Timing

The following table gives an indication of the timing of a typical roast, measured from the time you pour the beans into the machine. Note that the timetable below is only an example. The actual timing of your roast may be very different, and depends on many factors such as the variety of coffee you are roasting, the moisture content of your beans, the ambient temperature and humidity, and many more. Use these times as a rough guideline and don't worry about it if your roast times differ:

Approximate time	What You Will Notice
4:30 – 8:00	Beans are still green in colour, there is some steam, with a pleasant grassy aroma
8:00 - 10:00	Beans change slowly from green to yellow. The smoke initially smells like pancakes, then becomes more like baking bread.
11:00 – 15:00	Beans gradually turn from a dark yellow to a "cinnamon" brown colour. The smoke as a "nutty" odour.
15:30 - 17:00	Start of <i>first crack</i> , this sounds a bit like breaking pencils. Beans should be medium brown at this stage. The smoke increases and begins to smell like coffee.
17:30 -19:00	Start of <i>second crack</i> , this sounds like breaking toothpicks. Beans are dark brown and oil spots can be seen on some beans. Smoke becomes much denser.
19:30	You will hear the rapid sounds of second crack, and the smoke coming from the roaster will be pungent and quite dense. This is about as dark as most coffees should be roasted. Much more and the coffee will be burned.

III - Important safeguards

Before you begin roasting coffee with the Hottop Coffee Roaster, please take some time to read all the directions in this manual and the included roasting guide. It will help you understand how to get the best out of the Hottop Coffee Roaster. With a little care you will soon be enjoying delicious coffee you roasted yourself. The following safety tips will help keep you safe:

A. Before operating the machine

1. Read all safeguards, warnings, and instructions before using the Coffee Roaster. Keep these instructions for future reference and be sure anyone operating the machine reads and understands them.
2. Use the Coffee Roaster only for roasting coffee beans. Never place any other substances, food or otherwise, in the machine. Use of anything other than unroasted (green) coffee beans in the Hottop Coffee Roaster may create a hazardous condition and will void your warranty.
3. Never place your hands, fingers, or other foreign objects into the Hottop Roaster while it is operating or plugged in.
4. Use the Coffee Roaster only when fully assembled. Discontinue use if any part becomes damaged, or does not fit properly, or if the machine does not operate properly. ***Do not attempt to service the machine yourself, but seek repair or replacement.*** The Hottop Coffee Roaster does not contain any user serviceable parts.
5. Never use any accessories with the Hottop Coffee Roaster, unless these have been approved by the manufacturer. Extension cords are not recommended for use with this appliance.
6. Other than the cleaning procedures outlined below in this manual, do not disassemble the unit. Again, the machine does not contain any user serviceable parts.
7. Disconnect the power cord when the Coffee Roaster is not in use. Allow the machine to completely cool before disassembling, moving, or cleaning it. Do not move the machine while it is in operation.
8. To prevent electric shocks or fire, make certain that the electric cord is clear from the hot surfaces of the machine. Never operate the unit when the cord or the plug is damaged. When in use, position the cord where it will not get caught or tripped on which could cause the machine to fall or be moved about.
9. To prevent electric shocks, never use water on, or near the machine. Do not use outside where rain, or water from other sources can enter the machine. Never immerse the unit in water or any other liquid for cleaning.
10. When operating, keep the machine away from flammable materials such as curtains, towels, walls, furniture, or any other materials or surfaces that may ignite due to the heat. Keep it away from flammable materials until it has completely cooled off and it is unplugged. Leave sufficient space all around the machine during operation for proper airflow. This includes the area underneath the machine.

B. Using the Hottop Coffee Roaster

11. Do not touch the metal parts of the Coffee Roaster, as these will become very hot during and remain hot for some time after operation. Touching these surfaces may result in severe burns!
12. This machine is not a toy! Keep children away from the Coffee Roaster while it is in use, and while it is cooling after use.
13. ***Never leave the Coffee Roaster unattended while in operation.***
14. At the end of the roasting cycle when the beans are ejected into the cooling tray they will be very hot - 450 degrees F. (230C.) or more is possible! ***Do not touch the beans until the cooling cycle has completed!***
15. Coffee roasting produces smoke, and the amount of smoke increases as you roast darker. This is normal. We recommend that you use the Coffee Roaster in a place where ample ventilation is available, for example in the kitchen under the range hood, or near a window. Alternatively, you could roast in a garage, or shed.
16. Always allow the machine to go through the entire roasting and cooling process (except for hitting the "eject" button to stop a roast early) and let the machine turn itself off after each roasting cycle. This will help extend the life of the Hottop Coffee Roaster. Do not unplug the machine in the middle of a roast cycle.
17. Roasting coffee too dark should be avoided. Just like you can over-cook, and burn food on your stove, or in your oven, it is possible to over-roast and burn coffee in the Hottop Coffee Roaster, even if it is used according to the instructions. Although much care has been put into designing the device to safely perform automatic roasting and cooling cycles, over-roasting can occur. This is more likely to happen when using less than the recommended amount of beans on a setting that is too high.
Under extreme circumstances, over-roasted beans can catch fire, particularly when the beans are ejected and become exposed to oxygen. ***Always use the indicated amount of beans, and always monitor the progress of the roast to prevent over-roasting.***

C. After using the Coffee Roaster

18. Do all maintenance and cleaning only when the machine is ***unplugged*** and ***completely cooled off***. Refer to section III for more details on "Cleaning and Care".
19. Like many other parts of the Hottop Coffee Roaster, the chaff collection tray under the drum will be very hot after a roast. Allow the machine to cool before removing this tray for cleaning. The same goes for the cooling tray that catches the beans when the roast is completed.
20. Empty the chaff tray after ***every*** roasted batch. Material left in the chaff tray will become very hot during roasting, and therefore presents a fire hazard.
21. Chaff can ignite during the roasting process and may smoulder in the chaff tray. Use great care when disposing of the chaff as it can create a fire hazard, particularly if it is dumped into other flammable material soon after a roast has concluded.
22. Clean out the drum chamber after ***every four to five*** roasted batches. This is very important, since chaff, and small particles will accumulate at various places in the roasting chamber. Unless removed, this dry material can catch fire during roasting.

Figure 1.

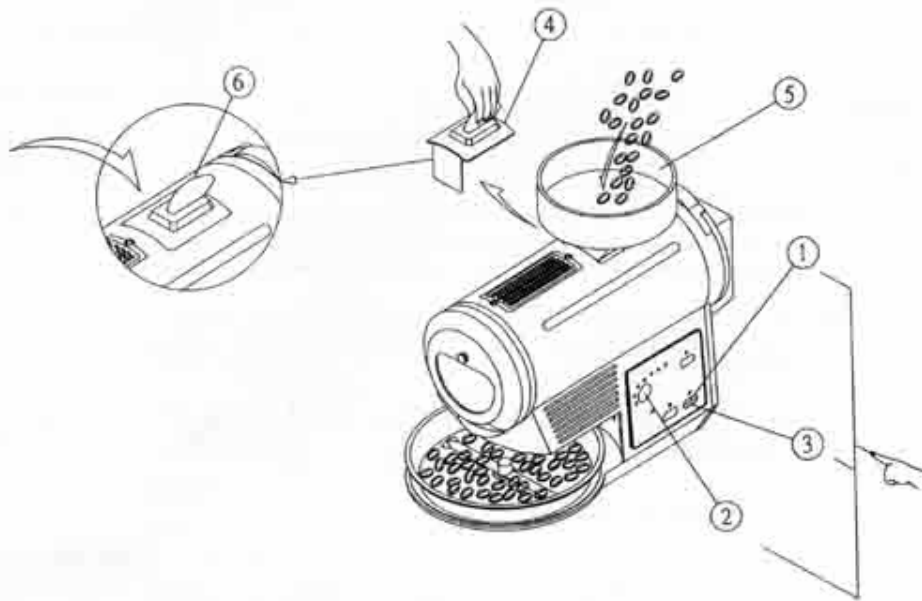
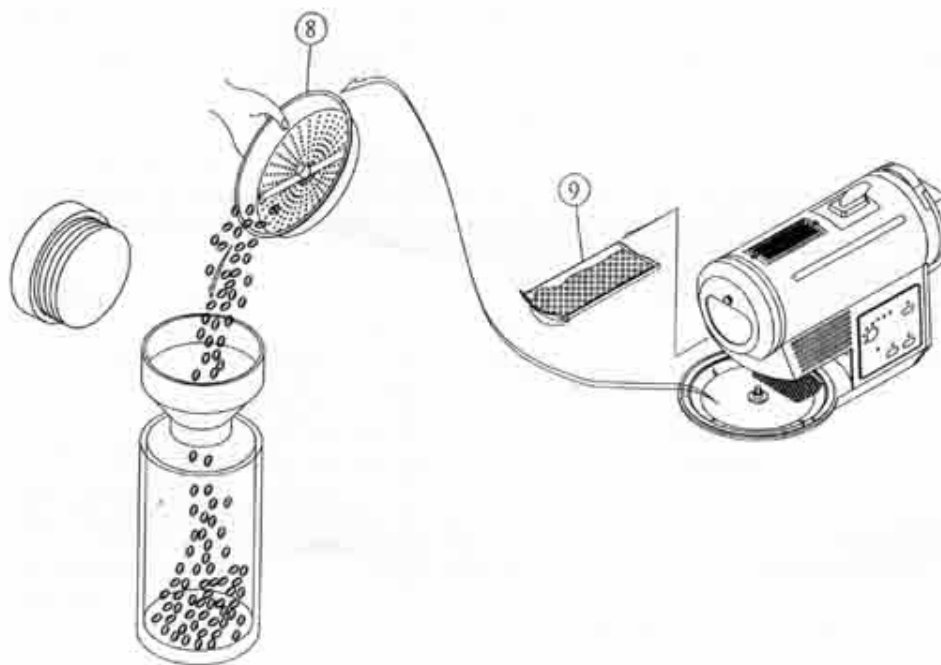


Figure 2.



IV - Basic Roasting Instructions

Although you may be a bit discouraged after reading the above, using the Hottop Coffee Roaster is actually quite simple, and very safe. Here is a short summary of the process. In the Hottop Coffee Roaster, the roasting process consists of three distinct stages, all of which are controlled by the microchip, and automatic.

1. First, the Coffee Roaster needs to be pre-heated – this is much similar to how you use your oven. The Coffee Roaster should not be filled with coffee beans during this **pre-heating cycle**.
2. The second stage, the **roasting cycle**, starts when the machine has reached the proper temperature for roasting, and you fill the Hottop Roaster with beans. This when the actual roasting happens. The roasting cycle will take approximately 16 to 20 minutes, depending on how dark you want to roast the beans.
3. After roasting, it is important to cool the roasted coffee as quickly as possible, this is called the **cooling cycle**. The Coffee Roaster features an external cooling tray, and cools it down to room temperature in less than five minutes. That is the fastest cooling cycle you will find in any home coffee roasting machine!

The following step-by-step instructions will guide you through the basic operation of the roasting.

A. Preparing for roasting

1. First, before you start roasting, pre-measure 250 grams (9 ounces) of green, unroasted coffee beans. Although you can use the Hottop Coffee Roaster to roast a little more, or less beans, it is recommended that you always use 250 grams of coffee. (But see the **Note** at the end of this section.)
2. Next, locate the Coffee Roaster where the roast will take place and plug the machine in. The power light comes on at this time indicating that the machine is ready.

B. Roasting

3. **Refer to Figure 1.** Push the "POWER/START" button (1) once to enter the roast setting selection procedure. Now press the "TEMP" button (2) to select the desired roast from one of the 7 settings. Repeatedly pressing the "TEMP" button will cycle through the roast levels until the desired level is selected. The higher the number, the longer the **roasting cycle** will take, and the darker the resultant roast will be.
4. Push the "POWER/START" button (3) again to start the **pre-heating cycle**. As explained above, this is the first part of the roasting process. The drum will begin turning, indicating that the machine is automatically warming up.
5. A few minutes later the Coffee Roaster will have reached its starting temperature. At this time the Coffee Roaster will start **beeping** to indicate that it is ready to roast coffee. Since many parts of the Coffee Roaster are hot, carefully remove the small lid (4) on top of the Coffee Roaster using the **plastic handle**.
6. Use the included funnel (5) to fill the machine with the pre-measured 250g of green (unroasted) coffee beans. After filling, remove the funnel and replace the lid (6). Use the vertical panel on the bottom of the lid to push any stray beans left in the loading chute into the roasting chamber. You are now roasting coffee!

NOTE: The Hottop Coffee Roaster will automatically roast the coffee according to the setting you selected. However, it is recommended that you always monitor the roasting process by looking through the convenient viewing window at the coffee beans. When, at any time during the process, you find that the beans are dark enough, you can manually interrupt the roasting by simply pressing the "Eject" button.

NOTE: As mentioned above, it is normal to see a certain amount of steam, and smoke escape from the Coffee Roaster during the roasting process. Smoke production will increase as the temperature of the coffee beans rises and with darker roasts.

7. After about 10 to 18 minutes, depending on what roast level you selected, the Coffee Roaster will start beeping again, signalling the end of the roasting cycle is approaching. Examine the beans through the viewing window. If you decide the beans need some more time to roast to the desired colour, you can now increase the roasting time by pressing the "PLUS" button (the light above the button will start flashing). Each press increases the roasting time by 20 seconds, and you can use this function up to five times.
8. About one minute after the "End of Roasting" signal (or longer, if you pressed the "plus" button), the Hottop Coffee Roaster will stop roasting, and will automatically deposit the roasted coffee beans onto the cooling tray (7). The arms will agitate the beans for about five minutes while the cooling fan under the tray blows air to cool the beans. When this **cooling cycle** ends the machine beeps repeatedly to indicate that it has finished the entire roasting and cooling process.

C. After roasting

9. **Refer to Figure 2.** When the Coffee Roaster has completed the **cooling cycle**, the cooling tray (8) can be removed from the machine. You can now use the funnel again to pour the roasted coffee in a canister, or jar for storage. A one-litre canister is large enough to hold all the roasted beans.
10. Now, remove the chaff tray (9), located underneath the window, from the Coffee Roaster by holding the black plastic front, and pulling it towards you. Empty the chaff tray and replace it in the roaster. Loosen the golden knob, and remove the front cover to clean the viewing window. Refer to section III below for further cleaning instructions.
11. Disconnect the power cord, and allow the Coffee Roaster to cool before storing the machine.

NOTE: If the roaster has not cooled sufficiently after the last roast cycle it will not be possible to start a new cycle. If you attempt to restart the Coffee Roaster when it is too hot, it will automatically go into the cooling mode until the machine has cooled sufficiently.

When the machine has reached the appropriate temperature, it will start beeping to signal you that it is ready to roast the next batch of coffee. This is the same signal as described in point 5. above. At this time you can proceed by filling the machine with beans, and continue a normal roasting cycle.

NOTE: On setting 2, the recommended batch size of 250g beans is normally roasted to a medium-brown ("City") colour. If the roasted coffee comes out too light, your household voltage may be too low. In that case, we recommend that you reduce the batch size to 230g of beans. If, on the other hand, the roasted coffee comes out too dark, try increasing the batch size to 270g. Try roasting the adjusted batch size on the same setting, at least two times. If this has not solved the problem, further reduce, or increase the batch size by 20g. Alternatively, select a higher setting to roast darker, or a lower setting to roast lighter.

Figure 3.

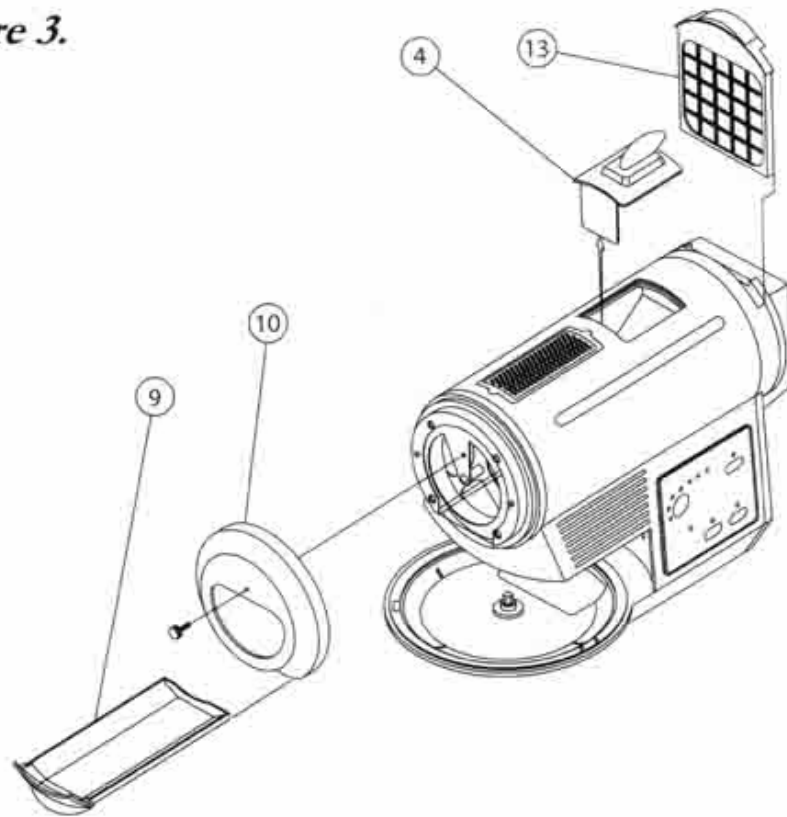
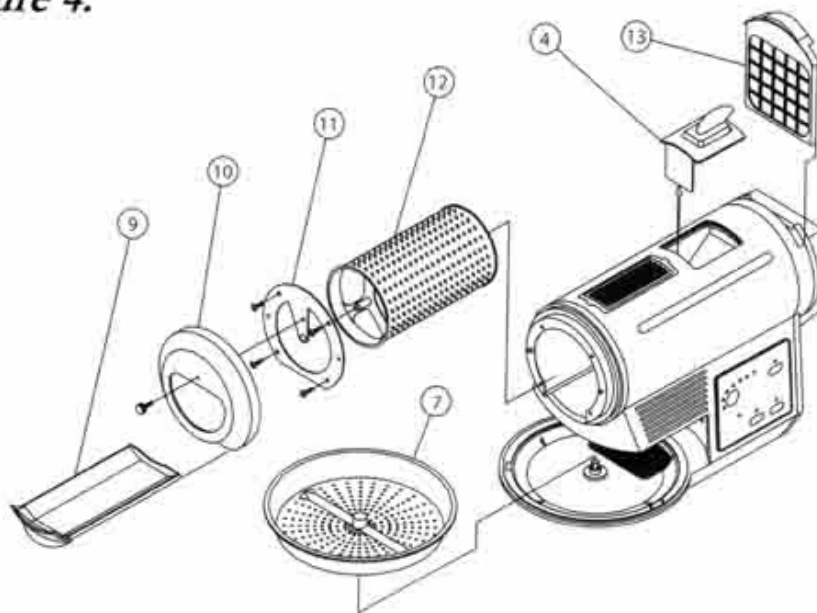


Figure 4.



V - Cleaning and care

To create the best coffee and extend the life of your Hottop Coffee Roaster, it is important to do some regular maintenance and cleaning. Cleaning should be done **only** when the machine has cooled down to room temperature. Here are some tips and precautions to help you.

A. After each roast

1. **Refer to Figure 3.** To prevent fire, it is important that the chaff tray (9) underneath the roasting drum is fully emptied after **every** roast. Pull the tray (9) out using the black plastic handle (located under the viewing window on the front of the machine). Use a soft brush, or kitchen towel to clean the tray. If required, wash the chaff tray with some water and soap.
2. To clean the glass viewing window, wait until the machine has completely cooled off and remove the chaff tray. While holding the front cover (10) on the machine with one hand, unscrew the golden knob with the other and remove it, which will allow the front cover to be easily lifted off.
3. Use a damp cloth, with a small amount of soap if necessary, to clean the glass. Encrusted oils on the glass can be removed using a stiff brush or nylon scouring pad.
4. Check the inside of the drum after each roast. Beans can sometimes get stuck in the drum and if allowed to go through a subsequent roast they will burn, this can affect the entire roast. Remove the front cover of the machine as described above and look inside the drum. Stuck beans can be dislodged using a long-handled, stiff brush or similar suitable tool. If necessary, remove the drum for cleaning (outlined below).
5. Replace the filter (13) at the rear of the machine after using 30-40 times. The filter cannot be washed.

B. After 4 to 5 roasts

Refer to Figure 4. Chaff and other small particles will accumulate in the roasting chamber after roasting several batches. Large amounts of this dry material can ignite and start a fire inside the roaster. It is therefore very important to remove the drum, and clean the entire roasting chamber after every 4 to 5 roasts. The following procedure describes how to remove the drum.

Note: Please take care when following this procedure. You can damage the machine, which may void the warranty, or cause a hazard not covered by the warranty. Use care not to scratch the machine or damage the drum. It is heavy so take care when removing it. Also watch for sharp edges on the drum and front plate. Wearing gloves for this procedure is recommended.

1. Start by removing the chaff-collecting tray (9). Now remove the gold knob and take the front cover (10) off, as described above. Place the front cover and chaff tray off to the side where they won't get knocked off the counter.
2. Remove the four phillips head screws on the front plate (11) and store these, for example, in the chaff tray (9). When the four screws have been removed, carefully pull the front plate off the Coffee Roaster. Note that it is located on two small metal pins on the front of the machine.
3. The drum (12) can now be taken out of the roasting chamber by pulling it straight out. You may need to lift it slightly before pulling it out as its weight might jam it in the drive shaft once the front plate is removed.
4. Clean out the chaff inside the roasting chamber with a soft brush or cloth, or using a (small) vacuum cleaner, which can be convenient to remove all chaff and dust inside the roasting chamber.
5. Some staining and discoloration is normal in the roasting chamber. For heavy build-ups of coffee oils use a rag **LIGHTLY MOISTENED** in a coffee machine cleaning solution. **DO NOT ALLOW WATER OR CLEANING SOLUTION TO DRIP INTO THE ROASTING CHAMBER!** Water damage is not covered by the warranty. Wipe the chamber thoroughly with a rag or towel moistened with clean water to remove all traces of cleaning solution. Allow the machine to dry completely before replacing the drum.
6. Over time the drum can become excessively caked with coffee oils. The drum can be taken out of the roaster completely for thorough cleaning. An espresso machine cleaner can be used or the removed drum can be placed in the dishwasher. Dry the drum thoroughly before replacing it in the Coffee Roaster. **NEVER** immerse the entire machine in water and **NEVER** place the entire machine in the dishwasher.

C. Replacing the drum

1. **Refer to Figure 4.** Put the drum (12) back in, being careful to align the drive pin on the drum's axle with the slot in the drive shaft. While keeping the drum parallel with the roasting chamber, push the drum until it is fully seated.
2. Reposition the front plate (11). The flange on the edges of the plate faces outwards (towards you). Make sure that the two pins on the front of the Coffee Roaster are aligned with the two small holes in the front plate and

- that the drum shaft goes through the hole in the centre of the front plate. Pushing on the plate, using only hand pressure, the plate should seat fully on the front of the machine with the alignment pins in their holes.
8. While holding the front plate aligned on the locating pins, replace the four screws by hand and screw them in by hand until seated. Once fully inserted, carefully tighten the four screws with a screwdriver. **DO NOT OVERTIGHTEN THE SCREWS!**
 9. Put the front cover (10) back and screw in the gold screw until lightly seated. Do not tighten the knob all the way. At the beginning of the next roast remember to adjust the gold knob until the drum rotates smoothly.

D. Exterior cleaning

Always wait until the machine is completely cooled before cleaning, and always disconnect the power cord before cleaning. The outside of the machine can be cleaned with a damp cloth, with a little household cleaner if necessary. Never use abrasive substances like steel wool pads, nylon scrubbing pads, etc. If the stainless steel cover has very stubborn spots, use a **VERY MILD** chrome polish. Afterwards, use a normal household cleaner to carefully remove all traces of wax, or polishing substance. Cleaning residue left on the hot surfaces of the roaster will burn when using the machine, and may produce toxic smoke, and leave severe stains. After cleaning, always allow the Coffee Roaster to dry completely before plugging in the power cord.

VI - Your First Roast

This chapter is intended to make you familiar with the roasting process, and the way the Hottop Coffee Roaster works. Before starting to roast your first batch of beans, be sure you have completely read and understand the safety precautions, and instructions presented above. Also, if you have no prior experience with roasting coffee, it is highly recommended that you read the introduction in chapter II. very carefully.

Remember that the only purpose of this first roast is to practice, so don't be too concerned if the coffee doesn't come out perfect. Also, don't be afraid that anything can go wrong, if you follow the safety precautions and the operating procedures, roasting coffee with the Hottop Coffee Roaster is fun, easy, and very safe.

For your first experimental batch, don't use your best and most expensive coffee, but instead select a variety that is easy to roast. As explained in chapter II. above, we recommend that you use Central American or South American coffees, such as Guatemalan or Colombian. These coffees have very loud cracks that are easy to recognize. Moreover, these are also relatively inexpensive, so if anything goes wrong, you don't have to feel too bad about discarding the beans.

For your first roast, follow the steps outlined in the above **Basic Roasting Instructions**, measure out 250g of the coffee of your choice, and select setting #3. This should be high enough to roast well into second crack. Proceed as described in the instructions.

As explained in the **Introduction to Coffee Roasting**, the first fifteen minutes after filling the Coffee Roaster are not particularly exciting, not much will happen. Nonetheless, it is important to remain near the machine and pay attention to what happens.

If you look closely at the beans, through the window in the front of the Hottop Coffee Roaster, you will see the gradual change of colour from green to light brown. You will also notice a change in the smoke emitted from the Coffee Roaster. Initially, there is just a little steam that has a pleasant grassy scent. As the roasting progresses, this turns into a more dense smoke that smells like hay, and later somewhat to making pancakes, or baking bread. Again, steam and smoke are normal by-products of coffee roasting, so don't worry, there is nothing wrong with your machine.

Again, sound is probably the most reliable indicator when roasting your first batches. When the beans are a cinnamon-brown colour, you will hear the first sounds of first crack. It is almost impossible to miss these loud and fairly sharp snaps. Apart from being an obvious sign of where the beans are in the roasting process, the sound of first crack also tells you that you should start monitoring the process even more closely. Although little has happened in the previous fifteen minutes or so, the roasting will proceed very fast from this point, and the beans will change enormously in the next five minutes.

As first crack subsides, there is usually a short pause. Now, be alert, and listen for second crack, which is a much softer sound, and perhaps more difficult to hear. Also, this may be the time when you will hear the beeping of the Hottop Coffee Roaster that signals it is near the end of its roasting cycle.

If the machine doesn't eject the beans automatically, wait until you have heard about fifteen or twenty of the muffled snaps of second crack (you don't need to accurately count that, just estimate), then push the "Eject" button to stop the roast. The Hottop Coffee Roaster then proceeds with the cooling cycle.

Congratulations, you have just roasted your first batch of coffee!

VII. Roasting styles overview

This section contains a brief explanation of the various roasts you can achieve with the Hottop Coffee Roaster, and will give you a general idea of how roast level affects taste.

Many people think that very dark roasted coffee is excellent, or that coffee has to be roasted until it is oily to be good, but that is just not always true. As mentioned before, a light roast, before second crack, keeps more of the delicate flavours, and can give the coffee a wonderful taste that many people never get a chance to enjoy. Experiment and you will discover what you like best.

Cracks, flavours and roast styles

Before first crack occurs, the coffee will often taste grassy, and can be quite sour. Coffee roasted this light is usually not very agreeable to the majority of coffee drinkers. Think of first crack as the time when the coffee is just entering the state where it becomes drinkable. Up to this point most of the roasting time has been spent removing excess moisture from the beans.

Roasted just into first crack, the coffee will become more crisp, and acidic - like a very dry wine. This roast style is generally called "Cinnamon". Some coffees can be very nice when roasted this way, but most people prefer a darker roast, which has a more developed flavour.

When first crack has slowed down, and shortly before second crack, the features of the particular coffee you are roasting will be most prominent. Depending on the coffee, these natural flavours can be remarkable fruity, or spicy notes, or taste like chocolate or nuts. This style, called "City", is generally preferred in most of eastern America, and Northern Europe, and very suitable for drip coffee, or press pot. Some "City" roasted coffees can also make a very nice espresso, or be used for siphon brewers.

A "City" roast is one of the more difficult to achieve because you have to predict when second crack will occur and stop the roast somewhat before that point. With experience, and by keeping a detailed "roasting log", you will learn anticipate this point.

As the roast progresses into second crack, the acidity gradually lessens, while the body of the coffee becomes heavier. The natural flavours of the coffee beans are reduced in strength, but the coffee gains in sweetness. Coffee that is roasted shortly (about fifteen snaps) into second crack is generally referred to as "Full city". This is the style that most people prefer for siphon brewers, and espresso.

As you roast further into second crack and the surface becomes shiny, the coffee will obtain a distinctly bittersweet taste. This is often referred to as a "Viennese roast", and many people like this for a cappuccino.

Be careful when you are roasting the beans this dark. Ten or fifteen seconds in roast time at this point can have a significant effect on the taste of the coffee, and a one-minute difference can easily be the difference between good coffee and burned beans.

The "Viennese" style is as dark as most people enjoy their coffee, but you may want to experiment roast the coffee even darker than that.

If you do, you will see drops of oil appear on the surface of the beans. The smoke produced now is quite dense, and has a sharp, pungent smell. The coffee usually acquires a similar sharp taste, with flavours reminiscent of burned toast. Some people do enjoy this "French" style.

Roasting even darker, "Spanish" as this style is sometimes called, is not recommended, because it will destroy most of the original flavour of the coffee, and few people appreciate the burned taste. Still, some coffee shops have made it their trademark. Give it a try, if only to find out if you like it.

NOTE: Be careful when trying to do very dark roasts. Second crack marks a time when you have to be especially attentive. The darker you roast, the faster the roasting progresses, and when second crack has started, things go very quickly. If you have selected a high setting (#6 or #7), it is important to be ready, so keep a finger near the "Eject" button to end the roast manually, if needed.

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During the roast process, if you start to see a lot of oil on the beans, if the crackling of second crack accelerates (becomes very active) and then starts to slow down again, or if the smoke begins to dramatically increase, immediately end the roast by hitting the "Eject" button. If you allow the roast to go much further it could burn the beans in the roaster. If you are not careful, the beans can even catch fire. As you get more accomplished at roasting coffee using the Hottop Coffee Roaster you will be able to roast darker, if that is your taste preference.

The roast styles can be summarized in the following table:

Roast colour:	Stage:	Name of roast style:	Appearance:
Very light brown	End of drying process	-	Dry
Light brown	Start of first crack	Cinnamon	Dry
Light-medium brown	First crack	Light	Dry
Medium -brown	End of first crack	City	Dry
Medium -dark brown	Start of second crack	Full city	Dry/shiny
Dark brown	Slow second crack	Viennese	Spots of oil
Very dark brown	Fast second crack	French	Very shiny/oily
Very dark brown	Fast second crack	Spanish	Oily

As a general rule, to obtain a bright cup with more a subtle flavour, try a lower setting to get a lighter roast. This is very suitable for filter drip, or press pot coffee. To get less acidity and a heavier bodied coffee, use a higher setting for a darker roast, which is usually more enjoyable for siphon brewing or espresso.

Although flavour is related to roast style, the result depends mostly on the variety of beans you roast.

Varieties and roast styles

There are, roughly speaking, two main categories of coffee, called Arabica and Robusta. Although the latter can be bought at a much lower price, Arabica is certainly the type of coffee with the most delicious taste.

Arabica coffees are grown in tropical regions around the world, and, as you might expect, the flavour of these varies enormously from one country to another. Even coffees grown in various regions within the same countries can be incomparable in taste; for example, coffee from Java is distinctly different from Sumatran, but both are called "Indonesian".

It is impossible to say which roast setting is "best" for a particular coffee. Coffees vary enormously; some are highly acidic by nature, and have a very strong taste, while others are fairly mild and delicate. We suggest that you try different beans at different roast levels, if only to discover and experience all that coffee has to offer. Perhaps you will be surprised to find that you enjoy a different style of roast than you always thought.

The only way to find out what tastes best to you is to roast a few batches of the same coffee at different styles, and see which you prefer. For your convenience we have added a few guidelines, to help you decide what setting to try first.

Central-American, Colombian and African coffees

Although these coffees are very different in flavour, they are commonly very acidic, or bright like dry wines. Many people associate this with a "sour" taste. If you appreciate this quality, you may want to try "TEMP" setting 2, to obtain a Medium -brown ("City") roast. This can be very enjoyable for drip coffee, but you may find that it tastes sour in a siphon brewer. For siphon brewers use settings 3, or higher, to roast these beans shortly into 2nd crack.

If you do not enjoy the "sour" taste, try roasting these coffees darker. Many acidic coffees are high grown, hard beans that can easily withstand a dark roast without losing their flavours. A Viennese, or even French style roast can be obtained by using settings 5, or 6, possibly increasing roast times by pressing the "PLUS" button up to four times.

Brazilian, Mexican and other mild coffees

As the title says, these are generally very mild coffees, with low acidity. They are usually very nice when roasted to Medium-dark brown (at settings 3, or 4), and can be used for drip coffee, siphon, and espresso.

Indonesian coffees

Like Brazilian, Indonesian coffees are usually not as bright as other origins, and you may want to try these roasted lightly, at a low setting. This can be very good for filter drip, or siphon.

If you find the flavour too strong, or if you enjoy espresso, try Medium-dark brown, or dark-brown roasted Sumatran, or Sulawesi coffee. Use settings 5, or 6, depending on the coffee used, and your personal preference. If a darker roast is desired, use the "PLUS" button a number of times, to increase the roast duration.

You decide!

All these remarks are solely intended as starting points. If you are not satisfied with the results, change the roast setting on the next batch. For a lighter roast, use a lower setting. To obtain a darker roast press the "PLUS" button one or more times, or select a higher setting. Don't be afraid to experiment with roast levels. Once you become familiar with the Hottop Coffee Roaster, it will be easier to determine which setting you will want to use for a particular variety of coffee, how to judge the roast progress, and how to intervene if needed.

So what roast style is best for your coffee? You decide, and nobody else! A lot depends on the variety or blend of the beans you are roasting, how it will be brewed (drip, press pot, siphon, espresso machine, etc.), Most importantly, of course, it depends on your own personal tastes. That is the joy of owning a Hottop Coffee Roaster; you decide what you like and roast to that level.

VII. Tips, Tricks, and Remarks

As you become more acquainted with the Hottop Coffee Roaster you will be better able to judge roast level and become more aware of how it affects the taste of the coffee. Here are some tips to help you along:

1. You can monitor the progress of the roast by watching the beans change colour through the window on the front of the Coffee Roaster. Shining a bright light through the window makes this easier. See section VII. for more detailed information on roast colour.
2. At any time during the roast, if you feel the coffee is to your preference, you can push the "EJECT" button to manually stop the roasting process. The beans will then be immediately dumped into the cooling tray.
3. If you think the beans are not roasted dark enough when the "end of the roast cycle" beeping sounds, you can press the "PLUS" button to increase the roasting time by 12 seconds. The "PLUS" button can be used up to 5 times during a roast cycle, each use will add 20 seconds to the cycle. Use caution because adding one minute to a level 6 or 7 roast can result in burned beans. Adding a full minute to a level "7" roast can possibly result in a fire. Remember that one minute for beans near their perfect roast is a very long time!
4. The "Coffee Roaster" is capable of roasting batches from 230g up to 300g. If you use a larger amount of coffee beans on the same setting, it will result in a lighter roast. Using a smaller amount of beans at any given roast level will result in a darker roast.
5. To achieve the same roast colour with larger batches, use a setting higher, or increase the roast time by pressing the "PLUS" button. Roughly, 30g-40g more coffee corresponds to one setting higher.
6. If the beans are not dark enough after the roasting has finished, you can reload these in the Coffee Roaster to be roasted again. Use great caution, as they will finish much faster than roasting green beans at the same roast level.
7. If the drum makes noise when operating, adjust the gold coloured knob on the front of the machine until the drum rotates smoothly. Start by loosening it then slowly tighten it until the sounds disappear. Be very careful, as this knob will be **VERY HOT** during and after a roast! Use an oven mitt or towel to adjust the knob.
8. Again, be careful when roasting very darkly. When you reach second crack, the clicks first increase in pace, becomes quite active, then decreases again. If you hear the crackling slow down again, it is a warning not to be ignored. The beans are about to be burnt, and if the roasting is not stopped, it may become a serious fire hazard. Learn to listen for the cracks and use them to help you achieve perfect roasts.
9. After roasting, it is best to let the beans "rest" for a few hours to a day before use. This releases some of the carbon dioxide gas in the beans, and allows the develop flavour to further. Leave the lid of the jar slightly open allow the gases to escape. After about 24 hours resting the jar can be closed tight to keep oxygen out.
10. Try not to roast more coffee than you can drink in a week or so. Roasted coffee kept longer than that loses much of its flavour. Serious coffee drinkers generally consider coffee that is about two weeks old to be stale and unusable.
11. Storing coffee in the refrigerator or freezer is generally not recommended. Vacuum packing is also not recommended as it accelerates the removal of some of the gases in the coffee, which can affect taste and in the long run actually accelerate the aging process. It is best to roast more often and have fresh coffee to drink than to roast so much that it has to be stored in the refrigerator.

12. Roasting decaffeinated beans is more difficult than roasting “regular” coffee. The colour of the beans is more difficult to discern and the cracks occur at a lower frequency. This is caused by the process the beans are subjected to when the caffeine is removed. For this reason, it is best to begin by roasting a few batches of “regular” coffee before attempting to roast decaf.
13. For professional roasters it is very important to write down everything that could help to reproduce successful roasts, or to improve those that were not as good. These notes are written in a "roasting log", which is somewhat like a "diary" with information about every batch they roasted. A professional roasters roasting log is usually very detailed, and may look something like this:

Coffee used:	<i>250g Panama La Torcaza</i>
TEMPsetting:	<i>2</i>
PLUS used:	<i>Not used</i>
EJECT used:	<i>Yes</i>
Ambient temperature:	<i>about 5°C</i>
Start of first crack:	<i>15'25</i>
Start of second crack:	<i>-</i>
Total roasting time:	<i>17'45"</i>
Roast style:	<i>medium-dark brown</i>
Appearance:	<i>quite even</i>
Roasting notes:	<i>Manually stopped the roast when the beans smelled ok</i>
Tasting notes:	<i>Nice nutty flavour, but too sour. Should roast this coffee darker next time! Use full automatic cycle, and maybe press "PLUS" button, once or twice.</i>

We recommend that you also keep a "roasting log", but, of course, it is not necessary to make this as detailed as the example above. You can easily leave out the grey shaded fields above, but we suggest that you at least keep some notes of 1. which coffee you roasted, 2. what amount, 3. at what setting you roasted it, 4. if the “Plus” function was used and how many times it was pressed, 5. if you used "EJECT", 6. the total roasting time. Most importantly though, write down how you liked the result. You can use this to decide how to roast the next batch of this particular coffee – the same, longer, or short. Your roasting log could then look like this:

Coffee used:	<i>250g Panama La Torcaza</i>
TEMPsetting:	<i>2</i>
PLUS used:	<i>Not used</i>
EJECT used:	<i>Yes</i>
Total roasting time:	<i>17'45"</i>
Tasting notes:	<i>Nice nutty flavour, but too sour. Should roast this coffee darker next time! Use full automatic cycle, and maybe press "PLUS" button, once or twice.</i>

If you want to measure how fast your beans roast for your roasting log, use a stopwatch, and start timing when you to pour the beans in the machine. Do not include the duration of the pre-heating cycle.

VIII. Resources

The best place to find information on just about any subject is the Internet and coffee is no exception. Here are a few tips to get you started:

Suppliers of Beans

The best place to find green beans is by mail order through the Internet. Do a search for “green coffee” or “coffee beans” and you will see that there are a large number of suppliers out there. You will be amazed at how many different coffees there are from which to choose.

Usenet

Another wonderful resource is Usenet (the “Newsgroups”). The *alt.coffee* group has a lot of folks who have been home roasting for a long time and there are a number of professional roasters frequenting the group as well. If you have questions about good coffee this is probably the best place to go.

The Worldwide Web

If you do a search for “coffee” or “coffee roasting” on the Web in your favourite search engine, be prepared to be offered thousands of Internet sites. It reflects how popular fine coffee has become and how many people, like you, are looking for something better in the way of coffee. There are even online forums dedicated to home coffee roasting.

Local Coffee Roasters

If you can’t find an online source for beans try contacting a local coffee shop that roasts its own coffee. Some of them will be glad to sell you green beans, sometimes even offering a discount.